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Depositor Discipline and Bank Runs

Reform of the U.S. banking system currently occupies center stage among domestic policy issues, with the spotlight on the recently released Treasury proposal. The wide variety of opinions expressed by industry experts, economists, and politicians confirms that we are far from consensus on the suitable direction for reform.

Many observers argue that banking reform should encourage market discipline of banks. A central question in this debate is who should provide that discipline. The Administration's plan includes proposals that would foster discipline from bank depositors. In this *Letter*, I consider some of the costs and benefits of encouraging depositor discipline.

Market discipline

Most firms fund their activities by issuing both debt and equity securities to outside investors. These "outside" funds exert market discipline on firm behavior. For example, investors demand a rate of return from a company's securities that reflects the riskiness of the company's underlying assets. The need to provide a risk-adjusted return to investors determines to some degree the firm's investment opportunities and may limit the risks it is able to take. In addition, in times of financial distress, outside investors may exert control over the firm in order to limit their potential losses. For example, shareholders may vote to change management, or creditors may force the company to reorganize by initiating bankruptcy proceedings. In either case, the risk of loss encourages investors to discipline the firm in order to alter its behavior.

Like most firms, banks fund their activities by attracting money from outside sources. In contrast to other firms, however, most bank funding comes from insured deposits. The protection provided by deposit insurance means banks can offer risk-free debt to depositors irrespective of their portfolio risk. The rate of return on this debt is thus unrelated to bank risk. Unlike other debt-holders, moreover, insured depositors provide no

market discipline since they face no risk of loss even if the bank experiences financial difficulties.

Of course, not all deposits are insured. Regulatory practice, however, has effectively covered almost all deposits at U.S. commercial banks. Techniques used to resolve failed banks, such as the purchase and assumption transaction, usually provide complete restitution to all depositors, including those not explicitly covered by insurance. Depositors also can bypass the coverage limits by holding multiple insured accounts. Thus, depositors have not been a source of market discipline for banks during the past several decades.

Depositor discipline and bank runs

If banking reform is to foster depositor discipline, it must place some depositors at risk of loss. This could be accomplished by enforcing strict limits on deposit insurance coverage or altering failed-bank resolution techniques so fewer depositors receive complete protection. How would depositors exercise this market discipline? Unlike non-bank creditors who typically have the power to force a company into insolvency for failure to meet debt obligations, bank depositors have no such power. Bank deposits, however, have a unique feature: they are payable on demand. Thus, depositors can exercise market discipline by immediately withdrawing funds from their bank.

If many depositors withdraw their money at the same time, a bank "run" can occur. If the bank has insufficient reserves or liquid assets to meet all of the depositors' demands, it may need to borrow funds to pay off depositors, or it may be required to sell quickly some of its less liquid assets, sometimes at prices below their true value in the portfolio. This loss of asset values can lead to declines in bank net worth and may even precipitate insolvency. Prior to the creation of deposit insurance, it was not uncommon for depositors to run on banks that were thought to

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be in danger of failing. Many of these runs led to the eventual failure of the banks. Deposit insurance was enacted to eliminate the destabilizing effect that such runs can have on the banking system.

Banking reform that encourages depositor discipline by placing some depositors at risk raises the probability that runs will occur. In considering the role of bank runs, it is important to distinguish between a run on an individual bank and a run on the banking system. The first kind of run may be "rational"; if depositors believe that a bank is insolvent, it makes sense for them to withdraw their funds. The costs associated with this kind of limited bank run typically are confined to the particular bank in question. Since the bank bears the cost of the run, it will be induced to hold more capital, maintain higher reserve levels, or reduce risk taking in order to minimize the likelihood that a run will occur. Indeed, these are the beneficial aspects of exposing a bank to depositor discipline.

A run on an individual bank, however, also may affect other, solvent institutions or even the banking system as a whole. Unless most (or all) banks are insolvent, this second type of "contagious" run generally is not rational. Contagious runs (if, in fact, they ever do occur) are problematic because they entail something economists call a "negative externality." Namely, if a run starts at one bank and can spread to others, it imposes costs not only on the bank in question but also on the other banks. When determining its own capital position or risk-taking posture, however, an individual bank is unlikely to take full account of the external costs associated with runs. The size of this negative externality determines the costliness of bank runs and the desirability of encouraging depositor discipline.

Evidence of bank panics

Consideration of a policy to encourage depositor discipline requires assessing the costs of bank runs and comparing these costs to alternative methods for resolving bank failures, such as those currently employed by the FDIC. Because bank runs have been virtually nonexistent since deposit insurance was enacted, research on this topic generally uses pre-1934 data.

Economic historians have identified a number of bank runs prior to 1934. Most of these runs were geographically contained, often in rural

areas, and many were limited to a small number of banks. These runs involved disruptions to local economies and losses by some depositors at individual banks or groups of banks. Losses, however, typically were quite small. A study by Benston, et al. (1986) indicates that in the 12 years between 1865 and 1933 that the FDIC identified as crisis years for bank failures, depositor losses averaged only 0.78 percent of total deposits in all commercial banks. One reason for the limited losses, these authors suggest, is that banks maintained high capital levels. Abundant capital permitted banks to sustain relatively high losses on assets before reaching insolvency and subjecting depositors to losses. Benston, et al., argue that the costs imposed by bank failures (and the associated bank runs) were no greater than the costs imposed by the failure of nonbanking firms. They suggest that most bank runs represented effective exercises in depositor discipline that promptly shut down poorly managed or insolvent institutions.

While these losses were small, they exceeded the recent loss experience of the FDIC. During 1988 and 1989, the two worst years for commercial bank failures since deposit insurance was enacted, FDIC losses were approximately 0.25 percent of total bank deposits at insured banks, or roughly one-third of the depositor losses experienced during the crisis years prior to deposit insurance.

While these numbers suggest the FDIC is more efficient at closing banks, they also may understate the true losses associated with current bank failures. A number of marginally solvent banks remain open and receive FDIC support through the "open assistance" program. Losses at these banks typically are not included in FDIC loss estimates. It is notable that a comparison of losses relative to the deposits of banks actually declared insolvent shows a similar experience between the two periods. From 1930 to 1933, losses by depositors as a percent of the deposits of failed banks were about 20 percent. FDIC losses in 1988 and 1989 were about 25 percent of failed bank deposits. It is thus difficult to suggest that closure by bank regulators is significantly less costly than closure by bank runs and depositor discipline.

The evidence on contagious bank panics is somewhat more difficult to address, because not all economists agree about the likelihood

of contained bank runs becoming contagious. The study by Benston, et al., for example, suggests that only two or three episodes prior to 1930 showed any evidence of contagion (as indicated by substantial increases in nationwide currency-deposit ratios and absolute declines in bank deposits). These researchers argue that the U.S. banking system was fundamentally sound prior to federal deposit insurance and was not prone to destabilizing banking panics.

Even if they occur infrequently, however, the negative externalities associated with contagious bank runs could be considerable. In their famous study of U.S. monetary history, Friedman and Schwartz (1963) note that, in the banking panics of the early 1930s, frightened depositors lost confidence in the safety of U.S. banks, whether they were solvent or not, and converted bank accounts into currency. Banks met these deposit withdrawals by drawing down their reserves and, in some instances, liquidating assets. With fractional reserve requirements, the ensuing decline in reserves led to a multiple contraction of deposits and a significant decline in the money supply. This monetary contraction exacerbated the economic depression sweeping the country. Friedman and Schwartz blame the Federal Reserve for failing to inject reserves into the banking system, thereby offsetting the panic-induced decline in the money supply.

Ben Bernanke (1983) describes another way that the banking panics of the 1930s imposed significant costs on the economy. His argument relies on the notion that banks are special because they provide unique intermediation services that help to overcome information problems in financial markets. He argues that bank runs led to a disruption in the provision of these intermediation services by banks. As a result of these disruptions, classes of borrowers found it difficult or expensive to obtain credit.

According to Bernanke, the large number of bank runs that occurred in the early 1930s produced a widespread credit crunch that only worsened the decline in aggregate demand. While it is difficult to assign specific figures to these effects, Bernanke's work provides additional evidence that Depression-era banking

panics imposed significant costs on the U.S. economy.

Should depositors discipline banks?

The benefits of depositor discipline involve depositors acting in concert with regulators to limit bank risk taking before the fact, and to close troubled institutions on a timely basis. These benefits must be carefully weighed against the costs before recommending reforms to promote such discipline. The costs of depositor discipline include the costs of bank runs and, more important, the external economic and social costs imposed by contagious banking panics.

Much research suggests that banking markets are fundamentally stable and not prone to contagious runs. On the other hand, if banking panics do occur, the costs can be substantial. Indeed, continuing fear of banking panics may mitigate against any policy that can be seen to encourage bank runs.

It is appropriate in the current environment to question policies and regulations that effectively remove most market incentives from banks and their owners and creditors. It is even more appropriate to envision and propose policies that will reintroduce market incentives and discipline into bank market. The best way to accomplish this goal is the difficult task currently facing policymakers.

Jonathan A. Neuberger
Economist

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Research Department
Federal Reserve
Bank of
San Francisco

P.O. Box 7702
San Francisco, CA 94120